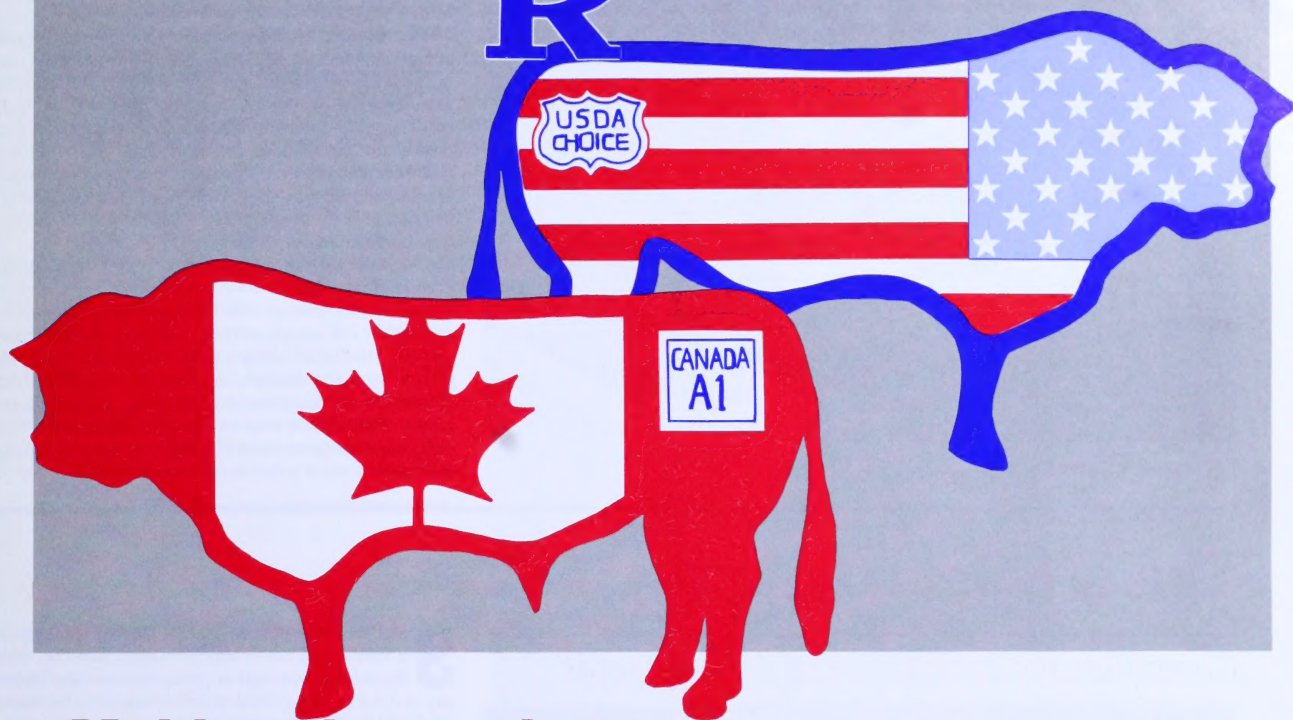


# Research Report



## Making the grade

### *Canadian quality v. U.S. price*

**A**lberta beef processors, like all good businessmen, would prefer to have more than one market for their product. Their most obvious alternative to domestic sales is south of the 49th parallel, but to date they have had limited success there. One of the greatest barriers to U.S. sales is the difference between Canadian and American beef grading systems. Canadian beef carcasses are leaner, on average, than American ones, says Dr. S.D. Morgan Jones, head of the meat research section of Agriculture Canada's Lacombe Research Station, but the difference is not reflected in the grading systems, making the Canadian product appear to be less of a bargain than it is.

The problem has been known to Alberta agriculturists for some time. In 1985, Robert Tchir, marketing officer, meats and dairy section, agri-food processing development branch, contacted Dr. Morgan Jones to request statistical information that could be used to explain the benefits of Alberta beef to American buyers. Dr. Morgan Jones, with the

assistance of a grant from Alberta Agriculture's Farming for the Future program, pulled together 15 years of data from about 10 different studies on meat yields, and fashioned all the information into one useable file.

What he compiled makes a strong case for the marketability of Alberta beef. He found that the average American carcass is rated Grade 3 on the U.S. scale, while an average Alberta carcass (Grade 3 on the Canadian scale) would measure Grade 2 on the U.S. scale. The Alberta product, quite simply, is of better quality. There is about 3% more meat on the Alberta carcass, says Dr. Morgan Jones, and that amounts to about 24 or 25 pounds of extra beef for the purchaser. On this criterion, U.S. Choice, the best American beef, is of less value than Canadian Grade A.

This information helps offset some disadvantages Alberta processors have relative to their American cousins, such as higher labour costs and smaller economies of scale. These factors have long kept Canadian beef prices

higher, and in American West Coast markets much of the buying is done on a price only basis. If an Alberta quote comes in 5% higher, says Dr. Morgan Jones, the American buyer isn't accustomed to looking at anything but that figure, and he'll likely go with the lower price. Alberta processors, he says, now have to take his information and convince American buyers that while the price may be a bit higher, Alberta beef is a better bargain. "They have to be made to understand that that price premium is more than offset by yield differences of up to 6% and 7%," he says.

Dr. Morgan Jones sees solid potential for Canadian exporters in California, an exceedingly health-conscious market. The trend toward leanness in meat is more pronounced in California than anywhere else on the continent, he says. What's more, the greater Los Angeles area alone holds close to 15 million people, and it is growing by about 500,000 people annually. He notes that West Coast buyers are looking for alternatives to the two

**(continued on page 2)**



# Farmers do compute

*A demonstration of agricultural software*



Cremona area farmer Ian Watt

For some years now, computers have been expected to provide great benefits to agricultural operations. But many farmers who could benefit from new technology have had no experience with computers, and those who have had some background in the area are reporting mixed results.

For instance, Ian Watt, a farmer for more than 30 years in the Cremona area, began using a computerized accounting program to keep the books for his operation four years ago. He used a program recommended to him by his accountant. Unfortunately, it was a program written expressly for accountants, and while it might be of great benefit in preparing his tax return, it didn't contain the kind of information Mr. Watt needed to run his farm, at least not in any readily discernible form. What he was left with was a mass of numbers on a long, complicated printout.

With the help of a grant from Alberta Agriculture's Farming for the Future On-Farm Demonstration program, he and Lorne Owen, an Alberta Agriculture regional farm economist, set out to write a new program that would interact with the accounting program and reduce the mass of data to a few bottom-line figures. Says Mr. Owen, "There are too many numbers on these accounting programs, and the information is badly organized. We're designing a program that will get the maximum amount of information out of a minimum amount of paper — just the

# The ethylene solution:

*Controlling the germination of dormant seeds*



Dr. Mary Spencer in her University of Alberta laboratory

Seed dormancy poses one of the greatest challenges to a farmer hoping to control weeds, says Dr. Mary Spencer, a professor of plant science at the University of Alberta. Many weed seeds become buried in the soil where they can survive for a number of years and build up to densities of 10 million to 100 million seeds per hectare. They emerge from dormancy at various times, some early in the season, some late, and produce weed seedlings. Farmers, as a result, are required to use herbicides and other control measures almost constantly. And even if the controls are successful and all the seedlings are eliminated before they reach the productive age, the reservoir of seeds

*"It doesn't leave undesirable residues, and it doesn't cause damage to the environment"*

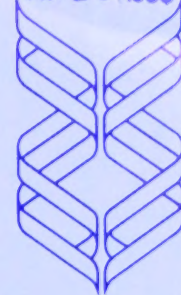
in the soil continues to produce new seedlings.

With the aid of a grant from Alberta Agriculture's Farming for the Future program, Dr. Spencer and her co-workers, Dr. H.S. Saini, Dr. J.S. Goudy and Dr. P.K. Barri, have been exploring the use of ethylene and other compounds to force dormant seeds to germinate in a short period. By a mass breakage of dormancy, they reason, a farmer's ability to control weeds should improve dramatically. They have met with considerable success under con-

## Canadian quality v. U.S. price ...continued from page 1

or three major suppliers with whom they now deal, and that Canada's clean air and clean water — taken for granted in these parts — are important selling points to Americans living in cities the size of L.A.





# FARMING FOR THE FUTURE



**By Dr. Jim Wiebe**  
Executive Director  
Rural Development  
Alberta Agriculture

information needed for farm management analysis. That kind of information is already there on the accounting program – it's just difficult to get at."

When finished, the new program will be able to show farmers such crucial information as the variance between last year's expenditures or revenues and this year's. It will track year-to-year variances in major cost items like feed

*"We're designing a program that will get the maximum amount of information out of a minimum amount of paper – just the information needed for farm management analysis"*

costs and livestock purchases. "The bottom line," says Mr. Owen, "is that the farmer will be able to tell where his money came from and where it's going." Mr. Watt expects that within two months he'll have a working program. He feels computers are becoming crucial to farm operations, and if the information they produce is presented in the proper way, farmers will be quick to see the benefits.

controlled circumstances. The method, Dr. Spencer adds, "has the additional advantage of being effective in very small quantities. It doesn't leave undesirable residues, and it doesn't cause damage to the environment."

The ethylene can be applied as a gas or in the form of ethephon, a commercially available compound. Both forms have been used in the southern U.S., says Dr. Spencer, to virtually eradicate witchweed. The research has shown that germination of wild oats and lamb's quarters is enhanced by the application of ethylene, and the germination of wild mustard and stinkweed is promoted by nitrate applied after a chilling treatment. Dr. Spencer also found that by applying nitrate and other nitrogenous compounds in concert with ethylene, even better results can be had against some weeds, depending on such factors as temperature and light.

In addition to stimulating germination, ethylene also severely stunted the growth of emerged seedlings either in the presence or absence of potassium nitrate. In a field situation, says Dr. Spencer, such seedlings would probably compete very poorly with the agricultural crops in the early critical days of seedling establishment.

Over the course of her two year study, Dr. Spencer also gathered information on optimum concentrations of ethylene and nitrates, and on the duration and frequency of treatments in relation to such factors as climate. The next step, she says, is field trials.

"It's a large market and its a wealthy market," he says. "If our processors put in the work, time, and the effort, there's great potential there. And if a free-trade agreement between Canada and the U.S. is ratified, eliminating the tariff on Canadian beef exports, the future looks even brighter."

It's my responsibility to manage the Canada-Alberta Subsidiary Agreement on Agricultural Processing and Marketing. This five year, \$50 million, shared program, is the successor to the Nutritive Processing Agreement. The objectives of the plan are:

- to foster an environment whereby the Province can realize its economic potential by capitalizing on its strengths as an integral element of economic and regional development;
- to promote balanced development among the regions of the Province and the equitable distribution of the benefits of such development; and
- to lead to continued diversification of the provincial economy by encouraging agriculture and food value-adding and research.

A further objective is to promote joint planning and joint action between Canada and the province in pursuing the economic and regional development priorities so as to:

- tailor federal programs and policies in line with the development opportunities and priorities of the Province;
- create mutually supportive and reinforcing development activities; and
- strengthen multi-departmental coordination within and between the two governments.

These objectives are based on our shared belief that the agricultural processing industry has the potential to make an even greater contribution to the provincial and national economies.

Toward that end, we have funded studies and projects in a wide range of activities, including: beef and pork processing plants that export Alberta products to the U.S. and Japan; two pharmaceutical plants, at Olds and High River; the only mustard processing plant in Western Canada, at Warner; a unique salad dressing and dessert topping plant, in Claresholm. Where we formerly imported magnesium oxide, Alberta now boasts Canada's only such plant, and has become a net exporter of this feed supplement. In addition we've supported dairy, cheese, specialty meat, pet food processing, and bakeries across the province. The projects range from old-tech to hi-tech, from sandwiches to splitting cattle embryos. Agreement supported Alberta products such as edible oils, beans, forages, seed, alfalfa pellets and cubes, vegetables, and lime for livestock are shipped around the world.

There are presently 1,000 applications for assistance on file, from modest to multi-million dollar deals. In many instances, the evaluation of these proposals is referred, in part, to agricultural researchers, to verify the validity and efficacy of the applicant's plan. In other cases, the plans are themselves the commercial implementation of recent leading edge agricultural research.

In any case, its clear, that innovation in agricultural and food processing needs research to grow, and Canada and Alberta need growth in processing



# Bringing it all back home

## Farming for the Future Conference to be held in Calgary

**T**oday's competitive marketplace is constantly putting new demands on farmers and food processors to keep pace with trends and technology. The 1988 Alberta Agriculture Farming for the Future Conference, slated for Calgary on March 18, is designed to address these demands by introducing producers to the wide range of research sponsored by Farming for the Future.

Established in 1977, Farming for the Future has two components: a Research Program, and an On-Farm Demonstration program. Research projects consist of development and testing of new practices and technology. The On-Farm Demonstration

*"What makes this conference especially worthwhile is that researchers will be discussing their results with the producers and the processors who can actually apply them."*

program involves the on-site testing and application of agricultural innovations by producers. Over the 10-year life of Farming for the Future, some 900 projects involving over 300 scientists and almost 350 farmers have been funded with \$41 million allocated from the Alberta Heritage Savings Trust Fund.

The 1988 conference will feature presentations on a variety of topics, including farm financial management, swine productivity, canola variety development, fertilizer recommendations for irrigated crops, federal and provincial roles in agricultural research, new processing ideas, feedlot cattle health management, improved feeding practices, and a number of demonstration projects. The Honourable Peter Elzinga, Minister of Agriculture, will deliver the keynote address.

Additionally, the work of a number of research scientists will be featured in display booths, including the following: the University of Alberta's Dr. D.S. Chanasyk on soil

erosion and degradation; Dr. R.S. Sadasavaiah of Agriculture Canada, Lethbridge, on breeding soft white spring wheat; Dr. H.H. Muendel, also of Agriculture Canada, Lethbridge, on safflower and soybean variety development; Dr. S.D. Morgan Jones of Agriculture Canada, Lacombe, on lamb carcass grading; and Dr. Len Bauer, University of Alberta, on computerized record keeping for farm financial management. Other displays planned are: alternative crops, by Dr. R. Gaudiel of Alberta Agriculture, Brooks; canola breeding, by Dr. Don Woods and Keith Topinka of Agriculture Canada, Beaverlodge and Lethbridge respectively; and intensive crop management, by D. Penny of Alberta Agriculture, Edmonton.

Dr. Woods will speak on canola variety development for the Peace River region and the development of winter canola for Southern Alberta. He will explain the history of canola breeding and production, leading up to "why we are where we are." Dr. Woods will discuss the needs and potential of the canola industry, "and what the feasible goals are — the value in dollars to producers and crushers." He will also provide some data to highlight the present state of canola breeding research.

Dr. Frank Aherne, a swine specialist with the University of Alberta's Department of Animal Science, will speak on the historical demands for increased productivity faced by the livestock industry and the contemporary trends towards producing leaner meats, and how these demands can initiate management and feeding practices which, unless implemented carefully, may hinder sow reproductive capability. He will explain that producers must always remember that part of maximizing production is keeping the birth rate up, and that modern management practices such as increased automation or rationed feeding must be re-evaluated with this in mind.

Dr. Len Bauer, a professor of rural economy, will speak on profit and survival for today's farm businessman. "The focus of a farm manager's decisions used to be production," he says. "But these days financial decisions have become a top priority." He will talk about how farmers must now consider enlarging or reducing their assets such as land, machinery or buildings. Then the farmer must examine what type of financing is best for him — debt, equity or lease. He will discuss what information is necessary for such decisions, and how research can build this information base.



Chairman H. B. "Ben" McEwen

The main goal for the conference is to allow researchers to explain their work and its possible applications. However, the schedule also allows time for questions and comments from the floor. "It is vital to the agriculture and food industry that innovative research continues, and equally critical to get the research results implemented in the field," says H.B. McEwen, chairman of the Farming for the Future Council. "What makes this conference especially worthwhile is that researchers will be discussing their results with the producers and the processors who can actually apply them."

The conference format is similar to that of previous conferences in 1984 and 1986. It will take place at Calgary's Marlborough Inn. Participants may pre-register by completing and mailing the coupon shown below.

### REGISTRATION COUPON

FARMING FOR THE FUTURE CONFERENCE,  
CALGARY, MARLBOROUGH INN, MARCH 18, 1988.

Name: \_\_\_\_\_ Usually called (First Name): \_\_\_\_\_

(Please Print)

Organization/Institution: \_\_\_\_\_

Address: \_\_\_\_\_

Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_

I will attend (circle): Luncheon Yes No

Banquet Yes No

I require extra tickets for:

Luncheon \_\_\_\_\_ ticket(s) x \$ 7.00 = \$ \_\_\_\_\_

Banquet \_\_\_\_\_ ticket(s) x \$15.00 = \$ \_\_\_\_\_

Total for extra tickets = \$ \_\_\_\_\_

Registration fee: \$25.00. Add extra ticket charges to your registration fee. Make your cheque payable to: ALBERTA AGRICULTURAL RESEARCH INSTITUTE

PLEASE MAIL THIS FORM WITH YOUR CHEQUE FOR REGISTRATION AND EXTRA MEAL TICKETS TO:

Farming for the Future Conference  
Research Division, Alberta Agriculture  
#202, 7000 - 113 Street  
Edmonton, Alberta T6H 5T6